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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,917	02/13/2002	Kenneth Elmon Koch III	46872.269148 (UNCC 2001-0	1717
44231	7590	08/08/2005	EXAMINER	
KILPATRICK STOCKTON LLP - 46872 J. STEVEN GARDNER 1001 WEST FOURTH STREET WINSTON-SALEM, NC 27101			PAN, DANIEL H	
			ART UNIT	PAPER NUMBER
			2183	

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/075,917

Applicant(s)

KOCH, KENNETH ELMON

Examiner

Daniel Pan

Art Unit

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 28-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02/13/02.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

Art Unit: 2183

1. Claims 1-27 are examined on the merit of the election on 05/16/05.
2. Applicant's election without traverse of claims 1-27 (Group I) in the reply filed on 05/16/05 is acknowledged.
3. Applicant is reminded in regard to the IDS filed by applicant on 02/13/02 that there was no entry of reference in the 1449 form. Therefore, the 1449 form was a blank form. It is believed that it might be an oversight of applicant. Applicant is reminded to submit corrected 1449 form in the next response.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/803,690. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Art Unit: 2183

Although the copending claim 1 did not recite the Conjunctive normal form Boolean expressions as claimed, the copending claim 1 recited normal form Boolean expressions. It would have been obvious to one of ordinary skill in the art to include conjunctive form as claimed because one of ordinary skill in the art should be able to recognize the normal form Boolean expression was also applicable in conjunctive form in order to expand the logic structure of the Boolean operations because the conjunctive form (e.g. the AND) was one of the standard format of the Boolean expression (the other format would be OR, XOR, etc), and in doing so, provided a motivation.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-21 are rejected under 35 U.S.C. 102(a) as being anticipated by Saldanha et al. (5,682,519).

6. As to claims 1,2, 8, 21, Saldanha taught a processor comprising at least :  
a) a Boolean logic circuit (see fig.5), wherein the Boolean logic unit is operable for performing the short circuit evaluation of Conjunctive Normal Form Boolean expressions/operations (see AND gate, see the short circuited AND in col.7, lines 53-65, see for Boolean expression );

Art Unit: 2183

b) a plurality of input/output interfaces (see fig.5) , wherein the plurality of input/output interfaces are operable for receiving plurality of compiled Boolean expressions/operations and transmitting a plurality of compiled results, and a plurality of registers (see Boolean expressions and compiled result in col.4, lines 48-67, col.5, lines 1-57, see also figs.4 , 7,8 for the input/output connections, see also the simulation of logic properties of the circuit and the Boolean expressions in col.2, lines 36-67 for background).

7. As to claims 3,9, Saldanha also rolled up the results of the AND and OR gates (see figs.4,5).

8. As to claims 4,5, Saldanha also had default and initialized value of 1 (see "1" in fig.4).

9. As to claim 6, Saldanha also remained one on true result (see the AND B value of 1 in col.2, line 62, see the OR 1 value in col.2, line 63, see also figs.5,7 ).

10. As to claim 7, see short circuited AND "0" in figs.5,7).

11. As to claims 10, 11,12, Saldanha also included OR "zero" until the conjunct was "one" (see figs.5,7, see also the enable signal in fig.5).

12. As to claim 13, Saldanha also included conjunct evaluation to true if the OR register is set to "1" and the OR conjunct register is set to "1", and the processor short-circuits to the start of the next conjunct (see the short circuited OR in col.7, lines 27-41, see the iterations for the next conjunct).

Art Unit: 2183

13. As to claim 14,15, Saldanha also included a decoder ( see the AND , OR, and the branches jumps for the conditional jump in fig.7).

14. As to claim16, Saldanha also inputted in parallel (see input at 560 in fig.8, see also the background of encoding in col.1, lines 63-67 ) and outputted across a device bus either in series (see bus to 600) or parallel (see parallel inputs to (500).

15. As top claim 17, see RAM in fig.2.

16. As to claims 18,19, 20, a micro program and program counter not explicitly shown, but see the computer OS, and software in col.5, lines 40-52). No specific format of the micro program and program counter can be found in the claim, therefore, it is read as a micro program and a program counter in the computer in general. AS to the configuring of the program counter and the jump operations , no specific configuration of the program counter and the jump operations has been reflected into the claim, therefore, it is assumed to be a general configuration. Saldanha also taught many computer system type and configurations were suitable for use (see col.5, lines 54-56).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saldanha in view of Gupta (6,385,757) .

Art Unit: 2183

18. As to claims 22,23,25 Saldanha did not specifically showed the instruction register, address register, nor the 3 bit operation code as claimed. However, Gupta disclosed a system including an instruction register, address register, and a variable length instruction (see col.44, lines 43-61, see also fig.14). It would have been obvious to one of ordinary skill in the art to use Gupta in Saldanha for including instruction register and the 3 bit operation code as claimed because the use of Gupta could provide Saldanha the ability to adapt to different instruction width based on the system requirement, and Saldanha did disclose that many computer system types and configuration were suitable for his system (see col.5, lines 54-57), which was an indication of the applicability of different system configurations, such as different number of opcode width, into the system in order to provide the enhanced adaptability, and for doing so, provided a motivation.

19. As to claim 24, see the instruction sequencer for the memory address in col.10, lines 16-28 for the address register. See also the OR in Saldanha for the OR register.

20. As to claims 26,27, as to the single bit register, Gupta already taught a variable length register, therefore, a single bit, or any number of bit should be recognizable by one ordinary skill in the art for implementing the logic gate operations.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Mansfield, Jr. et al. (5,530,939) is cited for the background teaching of the short circuited evaluation of the Boolean AND and OR (see col.5, lines 26-44).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 703 305 9696, or the new number 571 272 4172. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 703 305 9712, or the new number 571 272 4162. The fax phone number for the organization where this application or proceeding is assigned is 703 306 5404.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

***21 Century Strategic Plan***



Application/Control Number: 10/075,917  
Art Unit: 2183

Page 8

DANIEL H. PAN  
PRIMARY EXAMINER  
GROUP